Section 2.3

Integration of Legacy Parkway with Mass Transit

2.3.1 Summary of Approach for Supplemental EIS

2.3.1.1 Updates since Previous Final EIS

The appellate court remanded the Legacy Parkway Final EIS for further consideration of integration of Legacy Parkway with mass transit. To address this issue and to assist in the development of a comprehensive "integration alternative," the federal lead agencies used the Supplemental EIS scoping process to gather public input on the approach to analyzing the integration of mass transit with Legacy Parkway. Based on input received during the scoping meetings, *integration* was defined as how the roads and transit system can be built together, how they function with one another, and how the usage of both systems can be optimized (see the *Areas of Controversy* section of the *Summary* chapter of this document).

In response to the public comments, a technical team was formed to help identify and evaluate alternative ways of integrating the transportation network through the Shared Solution. This technical team consisted of representatives from the lead agencies, UDOT, UTA, and the Wasatch Front Regional Council (WFRC). As discussed in detail in Section 1.2.3, *Definition of the Shared Solution*, the Shared Solution is a multi-modal approach to solving the transportation needs of 2020 and beyond in the North Corridor. The Shared Solution consists of transportation system management (TSM) and intelligent transportation system (ITS) measures, travel demand management (TDM), an expanded mass transit system, reconstruction and expansion of I-15 to ten lanes, and construction of a four-lane Legacy Parkway. In addition to input from the technical team, the community planning information committee (CPIC) was consulted at strategic milestones in the development of the *Technical Memorandum on Integration of Highways and Transit in the North Corridor* (integration technical memorandum) (Fehr & Peers 2004) for review and input on the integration analysis and results. CPIC participants included representatives of local jurisdictions, nongovernmental organizations, and cooperating agencies. (CPIC members and goals are discussed in detail in the *Foreword/Introduction* of this document.)

Currently, the north corridor is developing regional mass transit that includes bus service and a planned commuter rail. UDOT initiated a study in August 2004 to look at the integration of expanded I-15 and commuter rail. Conceptual designs for each project had been proposed previously in their respective environmental documentation, the I-15 draft EIS and the commuter rail EIS (Federal Transit Administration and Utah Transit Authority 2004). In response to comments on system integration received during the Supplemental EIS scoping process, the Supplemental EIS includes a maximum future transit analysis scenario that added to the planned mass transit in the WFRC long-range plan. The maximum future transit scenario developed for the integration analysis assumes that transit-supportive land use is developed concurrently with implementation of commuter rail; this assumption includes transit-oriented development (TOD), transit service integration, and transit mode coordination, as well as distribution of transit service to within close walking proximity of most of the developed land use in the corridor. This approach allowed the lead agencies to assess whether and under what circumstances mass transit could carry a greater share of the travel demand and thus be more aggressively integrated with roads and the complete transportation system. The maximum future transit scenario used in the integration and sequencing analysis is robust transit package B, which was developed for this integration analysis and is referred to throughout this Supplemental EIS as "maximum future transit." Opportunities to integrate various physical aspects of the construction of elements of the Shared Solution were also analyzed. The results are summarized below in Section 2.3.2.3.

2.3.1.2 Changes since the Draft Supplemental EIS

The baseline travel forecast was updated as part of the integration analysis for the Shared Solution for the corridor screenline (Woods Cross). It is the only transportation analysis in the Supplemental EIS that is directly comparable to transportation analysis results in the Final EIS because it reports peak-hour volumes, as was used in the previous Final EIS, rather than peak-period volumes. For example, results of the integration analysis indicate that the Final EIS Shared Solution scenario showing travel demand of 24,110 peak-hour peak-direction PCEs has been reduced by about 20 percent from 24,110 PCEs reported in the Final EIS to about approximately 19,060 PCEs in the peak hour and peak direction due to updates in modeling procedures.

2.3.2 Summary of Integration Analysis

To ensure that results of the Supplemental EIS could be compared those of the 2000 Final EIS, measures of effectiveness used for the integration analysis were consistent with those used in the Final EIS. The integration analysis used improved analysis methods or updated information where available. Consistent with the Final EIS and to facilitate comparisons with that document, the integration analysis in this section uses 2020 p.m. peak-hour peak-direction passenger car equivalents (PCEs) at the Woods Cross screenline as a measure of typical traffic patterns and flow in the corridor. This is the same indicator, same location, and same units of measure as used in the Final EIS. Other sections of the Supplemental EIS also report corridor travel in terms of PCEs crossing the Woods Cross screenline, but they focus on the 3-hour *peak period* rather than the single *peak hour*. The peak period is used to show peak traffic conditions during broader periods of the day. Peak-period peak-direction PCEs are used to compare the performance of the alternatives to the purpose of and need for the project. The peak-hour is a refined subset of the peak-period; using the peak period in the analysis ensures that the integration analysis can be compared to the alternatives analysis.

Because new modeling and new population projections were available, the integration analysis uses updated WFRC socio-economic projections and WFRC 2004 travel model (version 3.2) to predict the year 2020 baseline travel forecasts. The total population and employment forecasts for 2020 have decreased by 2 to 7 percent since publication of the Final EIS. The updated travel modeling used for the Supplemental EIS projects that peak-hour peak-direction highway and transit PCE demand across the screenline would be approximately 19,000 PCEs compared to approximately 23,500 PCEs forecast in the Final EIS. This change in forecast does not change the conclusions on the need for Legacy Parkway (see Chapter 1, *Purpose of and Need for Action*).

The WFRC long-range plan and UTA current forecasts reflect transit ridership of 4.6 percent in the p.m. peak-hour, peak-direction compared to 12 percent maximum peak-hour transit ridership estimates in the Final EIS.[1] The integration analysis uses updated figures for total person trips and a sophisticated analysis of a full array of transit enhancements to develop aggressive transit scenarios. Under the robust transit packages used in this integration analysis (Packages A and B) and described below, the transit component of the Shared Solution is projected to carry 5.0 to 5.3 percent of the p.m. peak-hour, peak-direction travel demand in the North Corridor.

The following sections summarize the technical analysis used to reach these conclusions, as documented in the integration technical memorandum (Fehr & Peers 2004). Section 2.3.2.1 below describes the development of two robust transit packages, and Section 2.3.2.2 describes the results of the analysis regarding the integration of maximum future transit with Legacy Parkway.

2.3.2.1 Development of Integrated Transit Enhancement Packages

The integration analysis approach involved the following process.

- Use public and agency scoping comments to identify a comprehensive list of potential transit enhancements, including transit-supportive land use and TDM measures.
- Confirm that the travel forecasting models are capable of accurately accounting for changes in transit use resulting from changes in land use, transit service, and TDM variables.
- Establish maximum level of transit-supportive land use considered feasible in cooperation with local jurisdictions, federal, state, and regional agencies, and nongovernmental organizations.
- Screen transit enhancements based on evaluation of effectiveness, costs, funding, land use policies, and recommendations of affected jurisdictions.
- Prioritize and package measures into two robust transit packages that could be implemented early in the period between 2005 and 2020, and be fully effective for year 2020 projections, capturing the effect of giving transit the necessary time to have an effect on transit ridership.
- Conduct transit ridership analysis to determine performance of integrated robust transit packages.
- Incorporate the more robust transit package (referred to as maximum future transit) into analysis of the implementation sequencing of transportation improvements planned for the North Corridor.
- Assess physical design and coordination efforts for planned roadways to integrate road, park and ride, bus, rail, and other features.

A separate analysis evaluated alternative construction sequencing of mass transit, I-15 improvements, and Legacy Parkway as the major components of the Shared Solution. The analysis is described and documented in the sequencing technical memorandum (HDR Engineering 2004b). See Section 2.4 of this document for a description of the sequencing analysis and results.

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[1] See Appendix B, Section B3.5.1, of the Supplemental EIS for a description of the basis of the Final EIS transit ridership estimates.

The integration analysis looked at a full range of factors that can influence the success of transit within the transportation system (measured by transit mode capture rates). Comments received during the scoping process for the Supplemental EIS requested that a transit system be planned in a holistic way, considering not only modes and routes but also other features that affect how people choose to travel. Therefore, the integration and sequencing analyses incorporate the maximum future transit scenario deployed in a manner to maximize transit ridership. The resulting ridership forecasts are higher than those projected in the current long-range plan. The following transit-related enhancements were tested at a general category level as well as individually to determine their effect on transit ridership.

- Improved quality and quantity of transit service.
  - Commuter rail, express bus, and bus rapid transit (BRT).
  - Feeder bus and local bus.
  - Seamless transfers and increased service frequencies.
- Increased proximity and access to transit.
  - Land use intensification along transit corridors.
  - Expanded bus service coverage.
  - Transit access efficiency.
  - Route deviation bus service.
- Transit-oriented development (TOD).
  - Land use intensification at rail stations.
  - Urban design: development density and diversity.
- Travel demand management (TDM)
  - Parking pricing.
  - Transit fare structure.
  - Employer incentives.

Before evaluating the effectiveness of the prospective transit enhancements, the WFRC model was tested to determine its ability to accurately predict the effects of such enhancements. To test the model's accuracy, each of the above components was inserted into the model, and the highest practicable level of change above that projected in the long range plan was determined. This level of change was then compared to empirical evidence from comparable existing systems. Effectiveness testing was performed to assess the maximum transit potential of each element. Table 2.3-1 summarizes the findings with respect to increases in transit ridership from category-level and individual transit/land use enhancements.

The analysis determined that the WFRC model performed reliably with respect to measuring ridership changes associated with changes in commuter rail, bus services, seamless transfer, transit access, fares, and parking costs. However, for several components not ordinarily addressed in conventional travel models (TOD design, proximity of transit stations, and incentive-based TDM policies other than parking costs and transit fares), the model review found that additional off-model adjustments would be needed to improve the forecasts. For these components, the integration analysis therefore supplemented the WFRC model with empirically based off-model adjustments to forecast the effects of changes deemed reasonable and foreseeable by the responsible local jurisdictions and regional agencies. Table 2.3-1 identifies which transit enhancement components were measured using the WFRC model, and which were subject to off-model adjustments based on empirical evidence. The analysis found that the transit enhancements with the most significant effects on increases to transit ridership (based on increases in corridor mode-split percentages) were commuter rail service increase, transit-supportive land use and TOD, express bus services, seamless transit transfers, and parking cost increases. Based on these results, local representatives recommended using a robust transit approach that included commuter rail, BRT, and transit-supportive land use.

The next step in the integration analysis was to determine the level of transit-supportive land use considered achievable by local plans and visions. The lead federal agencies held a planning meeting with CPIC representatives to identify the highest level of transit-oriented land use that the jurisdiction, community members, property owners, and future real-estate market could support in areas surrounding commuter rail stations and prospective BRT stops. The intent of the planning session was to gather information on aggressive transit-supportive land use changes that could be used in the integration analysis. These aggressive transit assumptions include and go beyond the transit component of the current WFRC long-range plan. It is important to note that these transit assumptions are for analysis purposes only; to be implemented, they would require the passage of ordinances, the support and actions of local elected officials, and the reaction of the real estate market. Nongovernmental representatives of the CPIC attended, observed, and participated in this planning session. The land use changes identified for this analysis represent the professional judgment of senior staff at the involved jurisdictions. Planning staff in local jurisdictions consider these aggressive transit-supportive land uses and land use intensifications achievable. Participants in the planning session relied on commuter rail station location information contained in the FTA/UTA commuter rail final EIS (Federal Transit Administration and Utah Transit Authority 2005).

Representatives recommended land use shifts in terms of numbers of residents (population) and employment opportunities (jobs) within 0.8 km (0.5 mi) of all planned transit stations, with the largest recommended changes at Farmington (400 percent increase), 500 South (28 percent increase), and Woods Cross (39 percent increase). In addition, interviews were held with representatives of cities with transit station sites north of the corridor to identify land use shifts recommended for their jurisdictions. Figure 2.3-1 summarizes the land use shifts recommended by the CPIC subcommittee. For land use shifts in the corridor, the subcommittee representatives recommended shifting population and employment totaling about 5,250 people to locations within 0.8 km (0.5 mi) of transit stations. For land use shifts north of the corridor, the Cities of Pleasant View, Ogden, Roy, Clearfield, and Layton suggested shifting population and employment totaling about 3,360 people to areas within 0.8 km (0.5 mi) of planned transit stations. These land use shifts total approximately 8,600 more residents and employees that would be within a 0.8-km (0.5-mi) radius of transit stations than indicated in the current long-range plan projections.

Table 2.3-1 Increases to Transit Ridership Resulting from Individual Transit/Land Use Enhancements Based on WFRC Model Response and Empirical Evidence

Transit Enhancement	Range of Variability Tested[1]	Model Response[2]	Empirical Evidence[3,4]
Commuter Rail	Double train frequency (from 30 to 15 minutes)	Ridership up 47%	NA
Bus Rapid Transit (BRT)	Five BRT routes added on US-89 (increased total BRT routes from zero to five)	Ridership up 40%	Ridership up 20–50%
Express Bus	Increase frequency 50–100% (from 15 or 20 minutes to 10 minutes)	Ridership up 84%	Ridership up 28%
Local Bus	Double frequency (from 30 to 15 minutes, or from 20 to 10 minutes)	System Ridership up 4%	Route Ridership up 33%
Seamless Transfer	Reduce from 15 to 5 minutes	Ridership up 29%	Ridership up 33%
Transit Access	90% of all people within walking distance (0.25 mi) of any type of transit service	Area transit share up 2%	Area Transit Share up <5%
Transit-Oriented Design (TOD)	Double walkability, connectivity (placing transit-oriented development within 0.25 mile of stations)	**Negligible**	*Auto Trip Gen down 3%*
Proximity to Transit Stations	Double 0.5 mile density (varied by station)	**Ridership up 7%**	*Ridership up 20–25%*
Transit Fares	Reduce current fare by 50%	Transit share up 10%	Transit share up 10% –20%
Parking Costs	Increase current parking costs in the Salt Lake City central business district 50%	Central business district transit share up 2%	Central business district Auto Trips Down 15%[5]
Travel Demand Management (TDM)	Available to 15% to 20% of employees (up from zero)	**NA**	*Screenline Share up 5%*

Transit Enhancement	Range of Variability Tested[1]	Model Response[2]	Empirical Evidence[3,4]

Notes:

[1] Range of variability tested was the highest level that could reasonably be considered possible relative to the current long-range plan; i.e. if long-range plan stated that commuter rail would run every 30 minutes, analysis doubled it to run every 15 minutes. The range of variability is not the level used in the maximum future transit packages; instead, it is a level used to provide the study team with the maximum potential effectiveness of each element to serve as a starting point for the development of robust transit packages.

[2] In several respects not ordinarily addressed in conventional travel models, the model review found that additional off-model adjustments would be needed to improve the forecasts. Bold text indicates that the WFRC model is not sufficiently sensitive to changes to the land use/transit enhancement being tested, and therefore the analysis includes off-model adjustments based on empirical findings.

[3] Empirical findings used were published by the Transportation Research Board, *Traveler Response to Transportation System Change,* TCRP Project B12, Third Edition, USDOT, 1999–2003.

[4] Italicized text indicates off-model adjustments will be used to incorporate this empirical evidence into forecasting.

[5] Decline in auto trips due to shifts in transit mode and other modes, including carpool, taxi, walk, and bike. Reductions in auto travel are most pronounced when parking costs are higher. A given percentage change in parking costs beginning at $10 per day will have a greater impact on auto use than the same percentage increase on parking costs beginning at $1 to $2.

NA = Not applicable.

Based on the transit-enhancement effectiveness results, recommended land use shifts, capital and operating costs, additional transit funding from flexible sources,[2] and land use policies, two robust transit packages were created for the integration analysis: robust transit package A (Package A) and robust transit package B (Package B). For purposes of analysis, both robust transit packages assume that all the highway components of the WFRC long-range plan and the Shared Solution, as well as specific additional transit enhancements, are fully operational before 2020. Consistent with the long-range plan and Shared Solution, the transit packages include the planned express bus service designed to take advantage of the planned I-15 HOV lanes. The primary difference between the two packages is that Package B includes all the elements of Package A, but assumes more aggressive TOD/TDM policies. As previously noted, these aggressive transit assumptions differ from the transit component of the current WFRC long-range plan and would require the passage of ordinances, the support and actions of local elected officials, and the reaction of the real estate market for actual implementation.

Robust Transit Package A

Package A includes transit investment above the long-range plan levels to allow increased commuter rail service, several BRT lines and improved local bus service, transit access systems, transfer synchronization, and reduced transit fares. This transit package assumes a 50 percent increase in downtown parking costs in addition to inflation adjustments. This represents an aggressive assumption given the recent downtown employment decline and proposals to reduce parking prices or increase supply, but it is consistent with WFRC and the City of Salt Lake projected increase in downtown development densities by 2020. Package A consists of the following the primary elements.

- Commuter rail: 15-minute headways.
- BRT: premium service.
- East/west bus lines with seamless transfers.
- Local bus service distributed widely enough so that 95 percent population and employment are located within 0.4 km (0.25 mi) of transit.
- Premium transit fares reduced 50 percent.
- Downtown Salt Lake City and University of Utah parking costs increased 50 percent.

[2] Flexible sources include the potential for funds in addition to those funds allocated to transit under WFRC's December 2003 regional transportation long range plan aggressive funding program, which assumes $100 million per year in state general fund revenues for highway projects and additional local tax revenue for transit projects equivalent to a 0.25-cent sales tax increase and a 30-percent contribution from joint development and community participation. The State of Utah could elect to use a percentage of the state's federal apportionment for highway projects to support the additional measures of robust transit in the Shared Solution. To accomplish the integration robust transit packages would require regional consensus to divert additional flexible funds from other facilities, modes, or jurisdictions to further enhance the transit component of the North Corridor Shared Solution. Because such additional commitments are uncertain, the integration analysis may overestimate the transit share of future travel demand.

Robust Transit Package B

Package B includes all the transit elements in Package A and further strengthens the transit-supportive policy or “software” components. The following elements differ from or are in addition to Package A.

- Maximum encouragement of TOD at transit station sites, as defined by the CPIC land use subcommittee.
- Increased land use density within 0.4 km (0.25 mi) of premium transit by 24 percent in South Davis County.
- Downtown Salt Lake City and University of Utah parking costs increased by 100 percent to maximize the incentive to use mass transit.

The land use and parking-pricing strategies included in Package B are aggressive and represent the upper end of the reasonably foreseeable range. Robust transit package B is referred to as “maximum future transit” throughout the Supplemental EIS because it represents the most aggressive future mass transit scenario.

Table 2.3-2 presents a comparison of the packages to one another and to the 2020 future baseline conditions, which are referenced from the transit improvements included in the current WFRC long-range plan.

Table 2.3-2 Comparison of Robust Transit Packages A and B with Baseline Conditions Set by WFRC Long Range Plan

	Robust Transit Package	
Baseline	A—Robust Transit with Moderate TDM Policy Change	B—Robust Transit with Transit-Supportive Land Use and Aggressive TDM Policies
Land use per long-range plan	Long-range plan land use	Transit-supportive land use
Highway improvements per long-range plan*	Highway improvements per baseline	Highway improvements per baseline
Commuter rail operating per 2020 long-range plan	Increased commuter rail frequency	Increased commuter rail frequency
Express bus, I-15 and US-89	Express bus, I-15 and US-89	Express bus, I-15 and US-89
Local bus per long-range plan	Increased local bus service—designed to feed line-haul transit	Increased local bus service—designed to feed line-haul transit
Bus rapid transit—Farmington to Salt Lake	BRT re-aligned through all TOD opportunity sites	BRT re-aligned through all TOD opportunity sites
Transfers—15 to 20 minutes	Seamless transfer at BRT and CRT stations	Seamless transfer at BRT and CRT stations
Parking costs per long-range plan	Parking costs further increased by 50%	Parking costs doubled
Transit access—Baseline	Improved transit access	Improved transit access
Transit fares—Premium	Reduced fares for premium transit	Reduced fares for premium transit

	Robust Transit Package	
Baseline	A—Robust Transit with Moderate TDM Policy Change	B—Robust Transit with Transit-Supportive Land Use and Aggressive TDM Policies

Note:

* Includes Legacy Parkway and other components of North Corridor Shared Solution. Assumptions differ from 2020 LRP in that they include 10-lane I-15 and do not include the Legacy North project.

2.3.2.2 Integration Analysis Results

Figures 2.3-2 and 2.3-3 present the results of the integration analysis of the two robust transit scenarios, Packages A and B, compared to the auto, transit, and bike/walk/local numbers for the 2020 WFRC long-range plan baseline.[3] The comparisons illustrated in Figures 2.3-2 and 2.3-3 show, based on a consistent modeling base (2004 WFRC model with 2020 transit as defined in the current WRFC long-range plan), the degree by which integrating a robust transit package would increase transit ridership in the north corridor. This is measured in terms of transit riders translated into passenger-car equivalents. Consistent with and to facilitate comparisons with the Final EIS, the integration analysis in this section uses a 2020 p.m. peak-hour peak-direction travel demand volume at the Woods Cross screenline, expressed as PCEs, as a measure of typical traffic patterns and flow in the corridor. Compared to the Shared Solution with current WFRC long-range plan transit, integration Package A increases the 2020 p.m. peak-hour, peak-direction transit ridership by about 75 passengers (equivalent to 58 PCEs). This increase in transit ridership increases the corridor mode share from about 4.6 percent to about 5.0 percent. Package B increases the 2020 p.m. peak-hour, peak-direction transit ridership by about 148 passengers (equivalent to 114 PCEs). Package B also increases the number of people traveling shorter distances primarily by bike and walking, as a result of more clustered land uses (i.e., compact land uses would reduce trip lengths, thereby encouraging people to travel without an automobile). As a result, Package B reduces automobile demand at the screenline by shortening trips and converting trips to transit, bike and walk modes. In total, integration package B decreases auto traffic at the screenline by approximately 204 PCEs, from 18,046 PCEs to 17,842 PCEs.[4] The increase in transit ridership raises the corridor mode share from 4.6 percent to about 5.3 percent.

The integration analysis transit mode-share findings are consistent with transit mode shares found in corridors elsewhere in the Salt Lake region (approximately 4 to 5 percent mode shares in the TRAX/I-15 corridor south of downtown Salt Lake City at 4000 South). The integration analysis results are reasonable considering the linear nature and multiple functions of the North Corridor and the small percentage of commuter travel oriented to downtown Salt Lake City or other central travel destinations. The North Corridor serves multiple travel needs, including long-distance, interstate, international, and dispersed travel in the Salt Lake region, as well as a small percentage of commuter travel to downtown Salt Lake City. On a daily basis less than 10 percent of trips crossing the southern boundary of the North Corridor are oriented to downtown Salt Lake City. This percentage is similar for peak-hour travel. This usage

[3] The analysis presented in Figure 2.3-2 assumes completion of Legacy Parkway (by 2020) and improvements to I-15 (up to ten lanes), but excludes construction of separate Legacy project north of North Corridor.

[4] Figures 2.3-2 and 2.3-4 present the results of the integration analysis, including appropriate off-model adjustments. Integration of Package B, before off-model adjustments were made, showed 17,905 PCEs in auto, 959 PCEs in transit, and 123 PCEs in bike/walk. The results were modified with off-model adjustments to reflect changes in travel characteristics resulting from the land use changes that the travel model is not designed to capture. The off-model adjustments were to the proximity to BRT and CRT stations (within 0.8 km [0.5 mi] of BRT stops and commuter rail stations) as well as TOD design (TOD within 0.8 km [0.5 mi] of commuter rail stations). Off-model adjustments were made only to Package B.

pattern limits the ability of a downtown-focused transit system to attract a high percentage of corridor travel.

2.3.2.3 Integration of Physical Construction of Legacy Parkway with Mass Transit Improvements

Since publication of the Final EIS, commuter rail planning has advanced to the stage that the commuter rail EIS has been finalized and a Record of Decision has been produced (Federal Transit Administration and Utah Transit Authority 2005). (See Appendix A of this Supplemental EIS for a copy of the charter created by UTA and UDOT for coordination and cooperation in development of the Shared Solution transportation improvements.) Now that more detailed planning and environmental compliance processes are underway for the commuter rail project, UTA is benefiting from the integration options offered by the Legacy Parkway project.

The integration analysis presents and evaluates opportunities already realized and those with future potential to integrate the construction of physical elements of the proposed Legacy Parkway with planned mass transit improvements in a way that provides efficient interfaces and service coordination of highway and transit travel. The Legacy Parkway project includes the following physical construction integration components.

- Placing interchanges at locations that can access future planned commuter rail stations.

  The commuter rail final EIS (Federal Transit Administration and Utah Transit Authority 2005) confirms that the proposed Legacy Parkway interchanges are located at or near the locations of future planned commuter rail stations (one in Farmington near the I-15/US-89/Legacy Parkway interchange and one in Woods Cross at 500 South near I-15). The proposed interchange locations of Legacy Parkway also allow for providing convenient park-and-ride facilities to facilitate carpooling and feeder-bus access to commuter rail stations.

- Changing the project design to lengthen structures to accommodate the physical integration of the commuter rail component of mass transit with Legacy Parkway and I-15.

  As a result of the work completed under the design-build contract since the Final EIS, UDOT incurred an additional $6.8 million in design and construction costs in the following structures to allow for the physical integration of commuter rail: Park Lane (formerly Burke Lane) (construction completed), I-15 southbound to Legacy Parkway southbound, Legacy Parkway northbound to I-15 northbound, US-89 southbound to Legacy Parkway southbound, Legacy Parkway northbound to US-89 northbound, State Street, and Glovers Lane. (Figure 2.3-4 identifies the location of all bridges.)

- Providing funding ($10 million) to UTA to aid in the purchase of commuter rail right-of-way that passes directly beneath a portion of the proposed Legacy Parkway and adjacent to I-15. These funds provided by UDOT were originally allocated for the design and construction of the Legacy Parkway project.

2.3.3 Conclusions

The integration analysis evaluates how the roads and transit system of the Shared Solution can be built together and function with one another, as well as how the usage of both systems can be optimized, taking into consideration the extent to which enhancements to future transportation and land use patterns are feasible and reasonably foreseeable. Package B represents maximum future transit, which is an aggressive improvement on the transit usage called for in the long-range plan that could be achieved through incorporation of transit-supportive land uses along the corridor. The federal lead agencies believe that analyzing the robust transit packages offered a reasonable way to evaluate how transit could be more fully integrated into the transportation system. The analysis used state-of-the-practice methods and a cooperative process through the CPIC meetings to involve local, regional, state, federal, and nongovernmental agencies to develop and present findings.

With the transit plan contained in the current WFRC long-range plan, which was used by FTA/UTA in the commuter rail final EIS (Federal Transit Administration and Utah Transit Authority 2005), transit as part of the Shared Solution is forecast to capture 4.6 percent of the peak-hour, peak-direction travel demand. The integration analysis results show that by integrating additional transit enhancements and modeling the effect of those features, maximum future transit could capture approximately 5.3 percent of the 2020 peak-hour, peak-direction travel demand (Package B).

For purposes of evaluating alternatives, this Supplemental EIS incorporates the following findings of the integration analysis.

- Providing funding ($10 million) to UTA to aid in the purchase of commuter rail right-of-way that passes directly beneath a portion of the proposed Legacy Parkway and adjacent to I-15.
- Design changes to the Legacy Parkway bridge and interchange structures to accommodate the integration of mass transit.
- The maximum future transit travel modeling assumptions (robust transit package B) for purposes of evaluating alternatives.